

Application No.:10/717,820
Response dated: July 29, 2004
Reply to Office Action of April 29, 2004

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1. (Currently Amended) A method of determining a reactor wall condition of a gas phase fluidized bed reactor, said reactor wall condition comprising an accumulation of polymer along a reactor wall, said method comprising measuring a static level at a distributor plate of the reactor using a static detector assembly comprised of an electrically isolated distributor plate cap connected to the distributor plate and to an electrical lead connected to a monitor, wherein a deviation from zero in the static level indicates a poor reactor wall condition.

Claim 2. (Original) A method of determining static level at a distributor plate of a gas phase fluidized bed reactor comprising:

- a. measuring a current flow through an electrically isolated distributor plate cap located at the distributor plate to generate current flow data, wherein the distributor plate cap is connected to an electrical lead that is further connected to a monitor; and
- b. determining the static level from the current flow data.

Claim 3. (Original) The method of claim 1 or 2, wherein the distributor plate cap consists of a conductive metal.

Claim 4. (Original) The method of claim 3, wherein the conductive metal comprises graphite, carbon steel or stainless steel.

Claim 5. (Original) The method of claim 1 or 2, wherein the distributor plate cap further comprises an insulator located between the distributor plate and the distributor plate cap.

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Claim 6. (Original) The method of claim 5, wherein the insulator comprises polytetrafluoroethylene.

Claim 7. (Original) The method of claim 1 or 2, wherein the connection between the distributor plate cap and the electrical lead further comprises a mechanical seal, wherein the seal is insulated.

Claim 8. (Original) The method of claim 1 or 2, wherein the monitor is selected from the group consisting of an electrometer, digital volt meter, ohmmeter, oscilloscope and picoammeter.

Claim 9. (Original) A method of determining a continuity disturbance in a fluidized bed gas phase reactor comprising the steps of measuring static in the reactor using a radio frequency antenna and determining a discharge frequency or a pulse amplitude, wherein a change in discharge frequency or an increased pulse amplitude as compared to a control indicates a continuity disturbance.

Claim 10. (Original) The method of claim 9, wherein the radio frequency comprises a frequency between about 15 kHz and about 1 GHz.

Claim 11. (Original) The method of claim 9, wherein the antenna comprises a shielded radio antenna.

Claim 12. (Original) The method of claim 9, wherein the radio frequency antenna further comprises an amplifier.